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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/466,308	12/17/1999	ACHAL R. PATEL	067191.0106	1006

7590 03/28/2003

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EXAMINER

NGUYEN, DAVID Q

ART UNIT	PAPER NUMBER
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2682

DATE MAILED: 03/28/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/466,308

Applicant(s)

PATEL, ACHAL R.

Examiner

David Q Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-83 is/are pending in the application.
- 4a) Of the above claim(s) 63-83 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 63-83 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10 and 1. 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Gunmar (US Patent Number 5293640).

Regarding claims 1 and 32, Gunmar discloses a system and a method for allocating bandwidth in a wireless communications network comprising a geo-location tool residing on a computers readable medium, the geo-location tool operable to receive data for a wireless communications network including a plurality of geo-location areas; estimate bandwidth parameters for a geo-location area based on the data (see col. 12; lines 60-68); and an allocation engine residing on the computer-readable medium, the allocation engine operable to allocate bandwidth in the geo-location area based on its bandwidth parameters (see col. 13, lines 4-7).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2-31 and 33-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunmar (US Patent Number 5293640) in view of Obhan (US Patent Number 6366780).

Regarding claims 2 and 33, Gunmar discloses a system and a method for allocating bandwidth in a wireless communications network comprising all of the limitations as claimed. Gunmar is silent to disclose the geo-location tool further operable to determine an allocation bandwidth for the geo-location area; and the allocation engine further operable to allocate bandwidth in the geo-location area based on the allocation bandwidth. However, Obhan discloses the geo-location tool further operable to determine an allocation bandwidth for the geo-location area; and the allocation engine further operable to allocate bandwidth in the geo-location area based on the allocation bandwidth (see col. 23, lines 1-18). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 3 and 34, Gunmar discloses a system and a method for allocating bandwidth in a wireless communications network comprising all of the limitations as claimed. Gunmar is silent to disclose wherein the bandwidth parameters comprise at least one of a bandwidth usage and a bandwidth demand for the geo-location area. However, Obhan discloses wherein the bandwidth parameters comprise at least one of a bandwidth usage and a bandwidth demand for the geo-location area (see col. 14; lines 33-34; col. 16; lines 57-59). Therefore, it

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would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 4 and 35, Gunmar discloses a system and a method for allocating bandwidth in a wireless communications network comprising all of the limitations as claimed. Gumar is silent to disclose wherein the bandwidth parameters comprise bandwidth interference contribution for the geo-location area. However, Obhan discloses wherein the bandwidth parameters comprise bandwidth interference contribution for the geo-location area (see col. 6, lines 57-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 5 and 36, Gunmar discloses a system and a method for allocating bandwidth in a wireless communications network comprising all of the limitations as claimed. Gumar is silent to disclose the geo-location tool operable to estimate bandwidth parameters for the geo-location area on a per service class basis; and the allocation engine operable to allocate bandwidth in the geo-location on the per service class basis based on the bandwidth parameters. However, Obhan also discloses the geo-location tool operable to estimate bandwidth parameters for the geo-location area on a per service class basis; and the allocation engine operable to allocate bandwidth in the geo-location on the per service class basis based on the bandwidth parameters (see col. 23, lines 1-16; lines 45-47). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the

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Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 6 and 37, Gunmar discloses a system and a method for allocating bandwidth in a wireless communications network comprising all of the limitations as claimed. Gumar is silent to disclose wherein the data received by the geo-location tool comprises historic and service level data for the wireless communications network. However, Obhan discloses wherein the data received by the geo-location tool comprises historic and service level data for the wireless communications network (see col.5, lines 41-49). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers

Regarding claims 7 and 38, Gunmar discloses a system and a method for allocating bandwidth in a wireless communications network comprising all of the limitations as claimed. Gumar is silent to disclose the geo-location tool further operable to generate, based on the data, a source map comprising sources of bit usage in the geo-location area and to estimate bandwidth parameters for the geo-location area based on the source map. However, Obhan also discloses the geo-location tool further operable to generate, based on the data, a source map comprising sources of bit usage in the geo-location area and to estimate bandwidth parameters for the geo-location area based on the source map (see col. 23, lines 1-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

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Regarding claims 8 and 39, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses wherein the sources of bit usage comprise a high bandwidth use facility for which a contractual service level is provided by the wireless communications network (see col. 23, lines 1-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 9 and 40, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses wherein the sources of bit usage comprise an establishment for which local wireless access is provided by the wireless communications network at a contractual service level (see col. 23, lines 1-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 10 and 41, Gunmar discloses a system and a method for allocating bandwidth in a wireless communications network comprising all of the limitations as claimed. Gunmar is silent to disclose wherein the data comprising contractual service level data. However, Obhan discloses wherein the data comprising contractual service level data (see col. 17, lines 40-46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 11 and 42, Gunmar discloses a system and a method for allocating bandwidth in a wireless communications network comprising all of the limitations as claimed. Gumar is silent to disclose wherein the data comprises at least one of data measured from usage within the wireless communications network, radio frequency measurement, and interference estimates. However, Obhan discloses wherein the data comprises at least one of data measured from usage within the wireless communications network, radio frequency measurement, and interference estimates (see col. 6, lines 35-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 12 and 43, Gunmar discloses a system and a method for allocating bandwidth in a wireless communications network comprising all of the limitations as claimed. Gumar is silent to disclose the geo-location tool further operable to generate, based on the data, a subscriber usage profile indicating the probability of a subscriber engaging in a connection at the geo-location area and to estimate bandwidth parameters based on the subscriber usage profile. However, Obhan discloses the geo-location tool further operable to generate, based on the data, a subscriber usage profile indicating the probability of a subscriber engaging in a connection at the geo-location area and to estimate bandwidth parameters based on the subscriber usage profile (see col. 2, lines 40-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

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Regarding claims 13 and 44, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses wherein the subscriber usage profile comprises mobility information for the subscriber (see col. 6, lines 10-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 14 and 45, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses wherein the subscriber usage profile comprises service class invocation information for the subscriber (see col. 6, lines 10-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 15 and 46, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses wherein the subscriber usage profile comprising call hold information for the subscriber (see col. 6, lines 10-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 16 and 47, Gunmar discloses a system and a method for allocating bandwidth in a wireless communications network comprising all of the limitations as claimed. Gunmar is silent to disclose the geo-location tool further operable to generate, based on the data, a current usage map indicating real-time bandwidth being utilized at the geo-location area. However, Obhan discloses the geo-location tool further operable to generate, based on the data, a current usage map indicating real-time bandwidth being utilized at the geo-location area (see col. 2, lines 40-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 17 and 48, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses wherein the current usage map comprises a peak rate for each active connection within the geo-location area (see col. 5, lines 41-49). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 18 and 49, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses wherein the current usage map comprises activity and service class information for each active connection within the geo location area (see col. 2, lines 38-46; col. 5, lines 41-49). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

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was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 20 and 51, Gunmar discloses a system and a method for allocating bandwidth in a wireless communications network comprising all of the limitations as claimed. Gunmar is silent to disclose the geo-location tool further operable to generate, based on the data, a current demand map for the geo-location area based on the data. However, Obhan discloses the geo-location tool further operable to generate, based on the data, a current demand map for the geo-location area based on the data (see col. 5, lines 15-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 21 and 52, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses a peak rate for each potential connection within the geo-location area (see col. 5, lines 15-22; lines 40-49). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 22 and 53, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses activity and service class information for each potential connection within the geo-location area (see col. 5, lines 15-22; lines 40-49). Therefore, it would have been obvious to one

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of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 24 and 55, Gunmar discloses a system and a method for allocating bandwidth in a wireless communications network comprising all of the limitations as claimed. Gunmar is silent to disclose the geo-location tool further operable to generate, based on the data, an expected demand map for the geo-location area based on the data. However, Obhan discloses the geo-location tool further operable to generate, based on the data, an expected demand map for the geo-location area based on the data (see col. 6, lines 35-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 25 and 56, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses a peak rate for each potential connection within the geo-location area (see col. 5, lines 15-22; lines 40-49). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 26 and 57, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses activity and service class information for each potential connection within the geo-

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location area (see col. 5, lines 15-22; lines 40-49). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 19, 23, 27, 50, 54 and 58, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses primary and neighboring server information for each potential connection within the geo-location area (see col. 6, lines 16-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 28 and 59, Gunmar discloses a system and a method for allocating bandwidth in a wireless communications network comprising all of the limitations as claimed. Gunmar is silent to disclose the geo-location tool further operable to generate an interference contribution map indicating the impact on resource usage of supporting various bandwidth at the geo-location area based on the data. However, Obhan also discloses the geo-location tool further operable to generate an interference contribution map indicating the impact on resource usage of supporting various bandwidth at the geo-location area based on the data (see col. 6, lines 57-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 29 and 60, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses an interference contribution value and a probability for each of a plurality of service classes associated with bandwidth at one or more sectors within the geo-location area (see col. 6, lines 40-41). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claims 30 and 61, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses expected resource usage for each of a plurality of service classes at the geo-location area (see col. 6, lines 57-67; see col. 6, lines 40-41). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

Regarding claim 31 and 62, Gunmar discloses a system and a method for allocating bandwidth modified by Obhan comprising all of the limitations as claimed above. Obhan also discloses the allocation engine further operable to generate a bandwidth supply map indicating the available bandwidth at the geo-location area based on the allocation bandwidth, a total bandwidth, and an interference contribution bandwidth for the geo-location area (see col. 6, lines 35-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Obhan to Gunmar in order to avoid blocking calls and reserve spectrum within the geo-location area for premium subscribers.

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Response to Arguments

3. Applicant's arguments with respect to claims 1-62 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Nguyen Q. David whose telephone number is (703) 605-4254. The examiner can be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (703)308-6739. The fax numbers for the organization

where this application or proceeding is assigned are (703) 872-9314 for all communications.

DN

David Q. Nguyen

Nguyen Vo
3/20/03

**NGUYENT.VO
PRIMARY EXAMINER**